(2)

NON-GENDER SAFETY FOOTWEAR: FIT AND FUNCTION EVALUATION

NAVY CLOTHING AND TEXTILE RESEARCH FACILITY
NATICK, MASSACHUSETTS

TECHNICAL REPORT NO. NCTRF 175

REPORT DOCUMENTATION PAGE

Form Approved OMB No. 0704-0188

1a. REPORT SECURITY CLASSIFICATION: Unclassified

1b. RESTRICTIVE MARKINGS:

2a. SECURITY CLASSIFICATION AUTHORITY:

2b. DECLASSIFICATION / DOWNGRADING SCHEDULE:

3. DISTRIBUTION / AVAILABILITY OF REPORT: Approved for public release; distribution unlimited.

4. PERFORMING ORGANIZATION REPORT NUMBER(S): NCTRF 175

5. MONITORING ORGANIZATION REPORT NUMBER(S):

6a. NAME OF PERFORMING ORGANIZATION: Navy Clothing and Textile Research Facility

6b. OFFICE SYMBOL (If applicable): 20

7a. NAME OF MONITORING ORGANIZATION:

6c. ADDRESS (City, State, and ZIP Code): 21 Strathmore Road, Natick, MA 01760-2490

7b. ADDRESS (City, State, and ZIP Code):

8a. NAME OF FUNDING / SPONSORING ORGANIZATION:

8b. OFFICE SYMBOL (If applicable):

9. PROCUREMENT INSTRUMENT IDENTIFICATION NUMBER:

8c. ADDRESS (City, State, and ZIP Code):

10. SOURCE OF FUNDING NUMBERS

PROGRAM ELEMENT NO.	PROJECT NO.	TASK NO.	WORK UNIT ACCESSION NO.
			62-2-84

11. TITLE (Include Security Classification): Non-Gender Safety Footwear: Fit and Function Evaluation (U)

12. PERSONAL AUTHOR(S): Bailey, Milton and Hall, Robert W.

13a. TYPE OF REPORT	13b. TIME COVERED	14. DATE OF REPORT (Year, Month, Day)	15. PAGE COUNT
Final	FROM Dec 87 TO May 88	89 January	22

16. SUPPLEMENTARY NOTATION:

17. COSATI CODES			18. SUBJECT TERMS (Continue on reverse if necessary and identify by block number)
FIELD	GROUP	SUB-GROUP	Safety Footwear; Fit; Foot Size; Military Boots and Shoes
23	04		
11	07		

19. ABSTRACT (Continue on reverse if necessary and identify by block number)

The Navy Clothing and Textile Research Facility (NCTRF) tested an array of 103 whole and half-sizes of Non-Sparking Safety Boots (MIL-B-87068), Chukka Safety Shoes (MIL-S-21894), Oxford (Safety) Dress Shoes (MIL-S-13192) for fit, function and comfort among Navy men and women operating at the Naval Training Center, Orlando, FL. Results of the test disclosed almost 100% of the male and female population can be satisfactorily fitted by each footwear's tariff. Essential for good fitting of the Navy population are an in-depth inventory of at least 62 sizes, a concept of fit that encourages issuing initially comfortable footwear as opposed to the "break-in" concept and use of the shoe-size fitting chart to estimate correct foot size. Cushion insoles enhanced the comfort of all footwear styles. Basic deficiencies were found in the fit and function of the women's dress shoe. In a sub-test, the chukka patterns precluded proper support and quickly caused blistered heels (regardless of careful fitting) among 30% of a female recruit group. Findings support consideration for
(Continued on reverse side.)

20. DISTRIBUTION / AVAILABILITY OF ABSTRACT: ☒ UNCLASSIFIED/UNLIMITED ☐ SAME AS RPT ☐ DTIC USERS

21. ABSTRACT SECURITY CLASSIFICATION: Unclassified

22a. NAME OF RESPONSIBLE INDIVIDUAL: John A. Mylotte

22b TELEPHONE (Include Area Code): 508-651-4680

22c OFFICE SYMBOL: OOP

BLOCK 19: ABSTRACT

abandonment of the chukka and replacement by the more supportive Non-Sparking Safety Boot. Findings also support consideration for development of a better fitting, more comfortable women's dress shoe. (U)

TABLE OF CONTENTS

	Page
Lists of Tables and Illustrations	iv
Introduction	1
Procedure	2
Fitting Test	2
Wear Test	3
Discussion	3
Fitting Test	3
Wear Test	4
Conclusions	5
Recommendations	5
Appendix A. Tables	A-1
Appendix B. Illustrations	B-1
Appendix C. Fitting Data Form	C-1

LISTS OF TABLES AND ILLUSTRATIONS

Table		Page
I	Male Size-Frequency Distribution Chart	A-2
II	Female Size-Frequency Distribution Chart	A-3
III	Male Width-Frequency Chart	A-4
IV	Female Width-Frequency Chart	A-4
V	Male Wear-Test Results (Fit)	A-5
VI	Male Wear-Test Results (Comfort)	A-5
VII	Female Wear-Test Results (Fit)	A-6
VIII	Female Wear-Test Results (Comfort)	A-6

Figure		
1	Frequency of Fit for Both Men and Women (Extra-Wide "XW" Sizes)	B-2
2	Frequency of Fit for Both Men and Women (Wide "W" Sizes)	B-3
3	Frequency of Fit for Both Men and Women (Regular "R" Width Sizes)	B-4

NON-GENDER SAFETY FOOTWEAR: FIT AND FUNCTION EVALUATION

INTRODUCTION

Considerable complaints have been received from both men and women of the Fleet about the poor fit and discomfort experienced by male and female wearers of non-gender footwear. Non-gender footwear includes Shoes, Safety (Chukka) MIL-S-21894 and Boots, Safety Non-Sparking MIL-B-87068, chukka and boot styles respectively, the preponderant footwear of the Navy. Site investigation confirmed the complaints and indicated that approximately one-third of the Navy population interviewed tolerates poorly fitted footwear.

Investigation revealed the following shortcomings:

1. Insufficient variety of sizes at points of issue.

2. Erroneous concept of fit that presumes footwear should be fitted tight, subsequently "broken in", and that pain is part of the process.

3. Failure to use shoe size fitting chart to estimate correct foot size.

4. Absence of wearer input on acceptance and performance of footwear during initial try-on and subsequent trial stages.

5. Absence of inspection of fitted footwear by qualified footwear fitter.

6. Loose fitting counters that preclude rear foot control, which can result in ankle injuries, falls, and generation of blisters.

7. Lack of foam insoles that prevent discomfort caused by debilitating impacts on feet during prolonged traversing on hard decks.

8. Dissatisfaction with fit and function of female dress shoe.

NCTRF personnel were assisted in conducting the fitting test by representatives of the Air Force and Marine Corps since both of these Services utilize the footwear. Three sets of footwear: a. Chukka, b. Boots, Safety, and c. Oxford with a safety toe, in sizes ranging from 2 to 12 and widths ranging from extra narrow (XN), narrow (N), regular (R), wide (W) and extra wide (XW) were distributed for testing at the Naval Training Center, Orlando, FL. The fitting test personnel included 135 males and 124 females who were randomly selected and fitted with footwear from the three styles. Results of the fitting test showed that the tariff could accomodate almost 100 percent of the male and female populations. Female sizes were entirely within the ambit of the inventory. All the footwear employed foam, cushion insoles. The dominant width for males and females was "W". There was a proliferation of unused sizes 2, 2 1/2 and 3 which included XNs, Ns, Rs and Ws. This indicates size redundancy, since geometric dimensional differences between adjacent sizes and widths at the low end of the tariff are trivial, i.e., 2 1/2 R and 3 R are substantially equivalent, and one may be substituted for the other.

Since the test oxford (men's) fitted the females better than the women's dress oxford, women were fitted with the men's shoe. Overall, females felt the boot was the most comfortable of the styles tested. Data showed a greater density of W and XW widths than revealed by supply system information, and a need for a smaller range of widths contained in the subset between 2 and 3 1/2. As noted above, the trival dimensional differences because of the geometric increments between small sizes, obviates the need for 1/2 sizes between sizes 2 and 3, and widths XN and N.

A sampling of the fitting test participants (58 men, 31 women) were chosen for a six-week wear test. Results of the wear test revealed that the preponderance of men and women were fitted "just right", except for women wearing the oxford shoe. In this case, 33 percent felt the shoe was either loose or tight. In terms of comfort, at least 83 percent of both men and women participants felt the three styles were "excellent" or "good". Most male responses showed no significant difference in the comfort afforded by any of the three styles, but the boot gave their feet more support. In a special sub-test to determine blister sensitivity, three out of 10 female recruits (30 percent) experienced heel blisters almost immediately after they began wearing chukka shoes and required treatment. After treatment, however, comfort was judged to be "good".

Based on the findings, it was concluded that careful measurement of feet, careful fitting of footwear selected from an in-depth inventory of varied sizes at retail centers, try-ons and immediate follow-up inspections are essential for satisfactorily fitted and comfortable footwear. Urethane foam insoles enhanced comfort and reduced foot fatigue. The vertical reciprocating pattern of the chukka riding up and down the heel caused blisters during the wear tests, and the inflexible pattern of the women's dress shoe caused women to step out of their shoes during the fit trials.

The evaluation confirms the need to replace the Chukka with the cushion insole Boot, Safety Non-Sparking as well as a greater use of W and XW widths for male and female personnel. It also substantiates the need to explore the feasibility of replacing the poorly fitting women's dress shoe by the better fitting non-gender style oxford. This shoe is available from the supply system and worn by female students of the Military Acadamies. The work also suggests a need to explore lighter, multi-density soles to enhance comfort of the footwear and diminish fatigue of personnel whose work requires traversing hard decks for long periods of time. The scope of this report encompasses the evaluation of the the fit and function of Navy non-gender safety footwear and the identification of problems related thereto.

PROCEDURE

Fitting Test

The investigation began with the accumulation of three different styles of safety toe footwear in sizes ranging from 2 to 12 including half-sizes, and widths ranging from XN, N, R, W, and XW. The footwear, all available from the stock system, were Boot, Safety, Non Sparking; Shoe Safety (Chukka); and Shoe Dress, Oxford. All were constructed over the MIL-7 safety toe last and contained foam insoles. The Naval Training Center (NTC), Orlando, FL where the evaluation took place, provided a fitting room and two platforms that

permitted four test participants to be fitted simultaneously. The participants were randomly selected men and women recruits and base personnel.

There were four fitters, two from the Navy and one each from the Air Force and Marines. These personnel were supported by the assistant clothing officer of NTC. The fitters agreed to employ a concept of fit that would assure maximum comfort. On that basis, the fitted footwear had to feel neither too tight in the toe or metatarsal regions nor cause discomfort. The boots could not be so loose in the vamp that the creased leather would abrade the skin, nor so loose in the heel or at the instep that the subjects' feet would shift excessively within the boot when walking. Fitters had to consider the extra space taken up by the cushion insole. Prior to the fitting process, every subject completed the heading of the Fitting Data Form (FDF) (see Appendix C). There was a white form for males and a yellow form for women.

When a test participant mounted the platform, the fitter checked the correctness of the FDF entries and measured his/her foot. Size was predicted on the basis of length and width of the foot which was translated to numerical and adjective designations; e.g., dimensions 9.3" x 3.5" translate to 5 1/2 R. The predicted size was a starter size and it generally required two fittings to achieve a correct fit. Size and width often changed with style so that a participant who found a 5 1/2 R oxford comfortable might require a 6 R boot or 5 1/2 W Chukka. Identically labeled lengths and widths of same or similar footwear constructed over the same last can differ in fitting charactaristics because of differences in materials, last size, design, manufacturing errors and volumetric changes in the foot that exceed 10 percent during the day.

Wear Test

At the completion of the fitting test, 58 randomly chosen male and 31 female participants wore the test styles for six weeks and evaluated the fit and comfort of the footwear during wear. In an effort to determine the frequency of the blisters caused by the Chukkas among women recruits, a sub-test was conducted where 10 females were randomly selected, fitted and immediately monitored.

DISCUSSION

Fitting Test

Table I shows that it required 39 sizes to fit the male population possessing "normal" feet (feet without significant deformaties). The smallest male size measured required a 4 XW oxford (tariff density 0.7%) while the largest measured required a 13 R (applicable to all three styles). Size 13 R, however, was not available from the test inventory but is available through the supply system. The smallest sizes fitted for the boots and chukkas was 4 1/2 XW, slightly larger than the oxford minimum 4 XW, for males. The tariff density of each was 0.8%. In terms of shoe volumes and linear dimensions, differences at the low end of the geometric last sizings are trivial. Both 4 XW and 4 1/2 XW geometric MIL 7 sizes would generally fit the same feet. Size preference however, could be influenced by manufacturing and material differences which also affect the feel and fit of footwear. Thus, identically

labeled footwear do not necessarily feel the same on the same foot.

Table II shows it required 41 sizes to fit the female population possessing "normal" feet. The smallest female size required was a 2 XW oxford (tariff density 0.8%) while the largest foot measured required a 9 1/2 N. The 9 1/2 N was applicable to the three styles. Tariff density of each 9 1/2 N was 1.6% The smallest size issued for the boots and chukkas was 2 1/2 XW with tariff density of 0.8 percent.

Tables I and II show an overlap of 18 sizes common to Navy men and women (46 percent of the sizes and widths used by men and 44 percent of the sizes used by women fit both men and women). As shown in Figures 1, 2 and 3, however, only approximately 18 percent of the male and female test population shared these common sizes and widths. Tables III and IV show the width frequencies of the styles fitted. These width frequencies of each style correspond closely in each table, and XWs are a significant proportion of the tariff. This proportion, however, is not demonstrated by current supply system demand statistics which show minimal XW distributions. Wides are the most frequent width required, about 50 percent for men and about 40 percent for women.

Wear Test

Because only one pair per style for each size was available, 43 percent (58 out of 135) of the male test participants and 25 percent (31 out of 124) of the female test participants tested the shoes for wear and responded to the test questionnaires. Wear test results shown in Tables V to VIII indicate that good static fit does not ensure comfortable wear. Only in the cases of the oxford for men and the boot for women were fit and comfort percentages the same. With the exception of women wearing the oxford shoe (67 percent fit "just right" while 84 percent felt comfort was "good" to "excellent"), most men and women were fitted "just right" (Tables V and VII), and at least 83 percent of the participants judged the comfort of the test footwear "excellent" or "good". In the separate subtest of 10 female recruits carefully fitted with Chukkas to determine the tendency of the shoes to cause blisters, three developed heel blisters immediately and required treatment. After treatment, the Chukkas were judged to provide "good" comfort. This high incidence of blisters is attributed to the pattern of the Chukka which caused the counter or back part of the shoe to ride up and down and abrade the heel.

Male respondents showed no significant preference for the comfort afforded by any of the three styles when results for "excellent" or "good" were pooled. However, those who most often expressed comfort as "excellent" wore the Non-sparking boot (Table VI). The test Chukkas fitted the females better than the boot or the oxfords (Table VII) as well as the standard women's dress shoe which was not evaluated. However, the women who most often expressed comfort as "excellent" considered the Non-sparking boot the most comfortable of the styles tested (Table VIII). The cushion insoles were overwhelmingly preferred by males and females for use in the three styles and were a significant factor in enhancing comfort of the three styles during training on the hard terrain.

CONCLUSIONS

The investigation showed that careful measurement of feet is required to obtain a fair approximation of shoe size, and that an in-depth inventory of approximately 62 sizes and widths is essential to select the correct fit for the population of men and women. Try-ons and immediate follow-up inspections are necessary for satisfactory fitting and comfortable footwear. Half sizes in all widths between sizes 2 and 3 may be eliminated because the differences in dimensions between whole and half sizes are minute.

Chukka patterns and women's dress shoe patterns require modification or abandonment, since they do not accomodate high instep feet and cause blisters. The work suggested the need for lighter, more flexible and more durable sole materials to diminish fatigue, enhance comfort and slip resistance required for traversing hard Navy decks.

RECOMMENDATIONS

1. Subject to approval by Uniform Matters Office, replace Chukka with Boot, Safety Non-Sparking.

2. Encourage greater use of "W" and "XW" widths among all personnel.

3. Explore feasibility of developing a better fitting, more comfortable women's dress shoe.

4. Investigate multi-density sole materials that could enhance comfort, durability, and slip resistance, and ensure lighter safety footwear.

5. Eliminate all widths (XN, N, R, W, XW) in sizes 2 1/2 and 3 1/2, since geometric incremental differences between size 2 and size 2 1/2 and size 3 and size 3 1/2 are trivial. For fitting purposes, these 1/2-size widths are redundant and thereby considered unnecessary.

Appendix A. Tables

Table I

MALE SIZE FREQUENCY DISTRIBUTION CHART

Size	Boot		Chukka		Oxford	
	F*	%	F*	%	F*	%
**4 XW	-	-	-	-	1	0.7
**4 1/2 XW	1	0.8	1	0.8	-	-
**5 1/2 XW	2	1.6	2	1.5	2	1.5
**6 W	2	1.6	2	1.5	2	1.5
**6 XW	1	0.8	-	-	2	1.5
**6 1/2 W	1	0.8	1	0.8	1	0.7
**6 1/2 XW	-	-	1	0.8	-	-
**7 W	1	0.8	2	1.5	1	0.7
**7 XW	3	2.4	2	1.5	3	2.2
**7 1/2 R	1	0.8	1	0.8	1	0.7
**7 1/2 W	3	2.4	2	1.5	2	1.5
**7 1/2 XW	2	1.6	3	2.3	2	1.5
**8 R	2	1.6	3	2.3	2	1.5
**8 W	7	5.0	6	4.6	8	5.9
**8 XW	1	0.8	1	0.8	-	-
**8 1/2 R	4	3.1	3	2.3	4	3.0
8 1/2 W	2	1.6	5	3.8	4	3.0
**8 1/2 XW	1	0.8	1	0.8	2	1.5
**9 R	6	4.7	6	4.6	6	4.4
9 W	8	6.3	10	7.6	9	6.7
9 XW	6	4.7	7	5.3	9	6.7
9 1/2 R	3	2.4	2	1.5	3	2.2
9 1/2 W	10	7.8	9	6.9	12	8.9
9 1/2 XW	3	2.4	3	2.3	2	1.5
10 R	7	5.0	7	5.3	6	4.4
10 W	10	7.8	9	6.0	7	5.2
10 XW	3	2.4	4	3.0	3	2.2
10 1/2 R	6	4.7	5	3.8	6	4.4
10 1/2 W	5	3.9	6	4.6	7	5.2
10 1/2 XW	2	1.6	3	2.3	4	3.0
11 R	3	2.4	3	2.3	2	1.5
11 W	8	6.3	8	6.1	8	5.9
11 XW	2	1.6	2	1.5	2	1.5
11 1/2 XW	1	0.8	1	0.8	1	0.7
11 1/2 R	1	0.8	1	0.8	1	0.7
11 1/2 W	4	3.1	5	3.8	5	3.7
11 1/2 XW	2	1.6	1	0.8	1	0.7
12 R	3	2.4	3	2.3	4	3.0
12 W	1	0.8	1	0.8	-	-
Total	128	100.0	132	100.0	135	100.0

*Frequency

**Sizes common to male and female feet.

Table II

FEMALE SIZE FREQUENCY DISTRIBUTION CHART

Size	Boot		Chukka		Oxford	
	F*	%	F*	%	F*	%
2 XW	-	-	-	-	1	0.8
2 1/2 XW	1	0.8	1	0.8	-	-
3 R	1	0.8	1	0.8	1	0.8
3 XW	1	0.8	1	0.8	2	1.6
3 1/2 W	2	1.6	-	-	1	0.8
3 1/2 XW	3	2.4	2	1.6	2	1.6
4 R	2	1.6	1	0.8	1	0.8
4 W	2	1.6	4	3.3	1	0.8
**4 XW	1	0.8	2	1.6	3	2.4
4 1/2 N	1	0.8	-	-	-	-
4 1/2 R	1	0.8	3	2.4	3	2.4
4 1/2 W	6	4.8	5	4.1	3	2.1
**4 1/2 XW	5	4.0	6	4.9	5	4.3
5 R	3	2.4	3	2.4	2	1.6
5 W	6	4.8	5	4.1	6	4.8
5 XW	4	3.2	3	2.4	3	2.4
5 1/2 R	3	2.4	4	3.3	9	7.3
5 1/2 W	8	6.6	7	5.8	7	5.6
**5 1/2 XW	6	4.8	6	4.9	4	3.2
6 R	3	2.4	2	1.6	3	2.4
**6 W	5	4.0	6	4.9	6	4.8
**6 XW	3	2.4	1	0.8	1	0.8
6 1/2 N	1	0.8	1	0.8	1	0.8
6 1/2 R	6	4.8	7	5.8	5	4.3
**6 1/2 W	8	6.6	8	6.8	9	7.5
**6 1/2 XW	2	1.6	3	2.4	3	2.4
7 R	8	6.6	6	4.9	7	5.6
**7 W	5	4.0	7	5.8	6	4.8
**7 XW	1	0.8	1	0.8	1	0.8
7 1/2 N	1	0.8	1	0.8	2	1.6
**7 1/2 R	1	0.8	-	-	1	0.8
**7 1/2 W	8	6.6	9	7.7	10	8.1
**7 1/2 XW	3	2.5	4	3.3	2	1.6
8 N	2	1.6	1	0.8	-	-
**8 R	4	3.1	3	2.4	4	3.2
**8 W	1	0.8	1	0.8	1	0.8
**8 XW	1	0.8	-	-	1	0.8
**8 1/2 R	1	0.8	2	1.6	3	2.4
**8 1/2 XW	1	0.8	1	0.8	1	0.8
**9 R	1	0.8	2	1.6	1	0.8
9 1/2 N	2	1.6	2	1.6	2	1.6
Total	124	100.0	122	100.0	124	100.0

*Frequency

**Sizes common to male and female feet.

Table III

MALE WIDTHS FREQUENCY CHART

Width	Boot(%)	Chukka(%)	Oxfords(%)
XW	22.0	22.9	23.8
W	48.8	50.3	53.4
R	28.4	26.0	22.1
N	-----	-----	-----
XN	0.8	0.8	0.8
Total	100.0	100.0	100.0

TABLE IV

FEMALE WIDTHS FREQUENCY CHART

Width	Boot(%)	Chukka(%)	Oxfords(%)
XW	25.8	25.4	24.0
W	41.1	42.6	41.3
R	27.4	28.0	30.6
N	5.7	5.0	4.1
Total	100.0	100.0	100.0

Table V

MALE WEAR TEST RESULTS (FIT)

Style	Just Right		Slightly Loose		Slightly Tight	
	F	%	F	%	F	%
Boot	22	92	1	4	1	4
Chukka	7	100	-	-	-	-
Oxford	24	89	-	-	3	11

TABLE VI

MALE WEAR TEST RESULTS (COMFORT)

Style	Excellent		Good		Average		Fair	
	F	%	F	%	F	%	F	%
Boot	18	75	2	8	1	4	3	13
Chukka	2	29	4	57	1	14	-	-
Oxford	17	63	7	26	2	7	1	4

Table VII

FEMALE WEAR TEST RESULTS (FIT)

Style	Just Right		Slightly Loose		Slightly Tight		Too Tight	
	F	%	F	%	F	%	F	%
Boot	10	84	1	8	1	8	-	-
Chukka	7	100	-	-	-	-	-	-
Oxford	8	67	1	8	2	17	1	8

Table VIII

FEMALE WEAR TEST RESULTS (COMFORT)

Style	Excellent		Good		Average		Fair		Poor	
	F	%	F	%	F	%	F	%	F	%
Boot	7	59	4	33	-	-	-	-	1	8
Chukka	3	43	3	43	1	14	-	-	-	-
Oxford	4	34	6	50	-	-	1	8	1	8

Appendix B. Illustrations

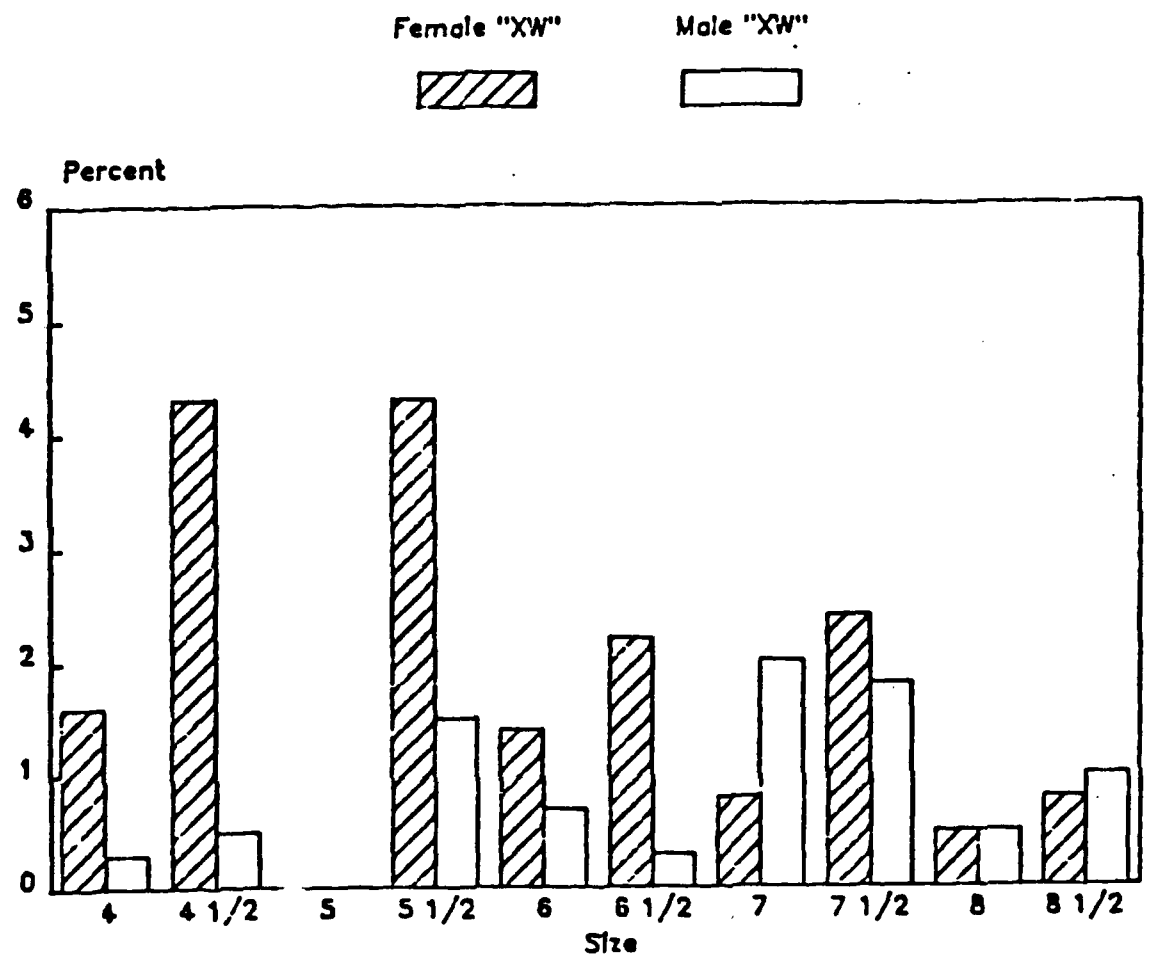

FIGURE 1: FREQUENCY OF FIT FOR BOTH MEN AND WOMEN
EXTRA WIDE "XW" WIDTH SIZES

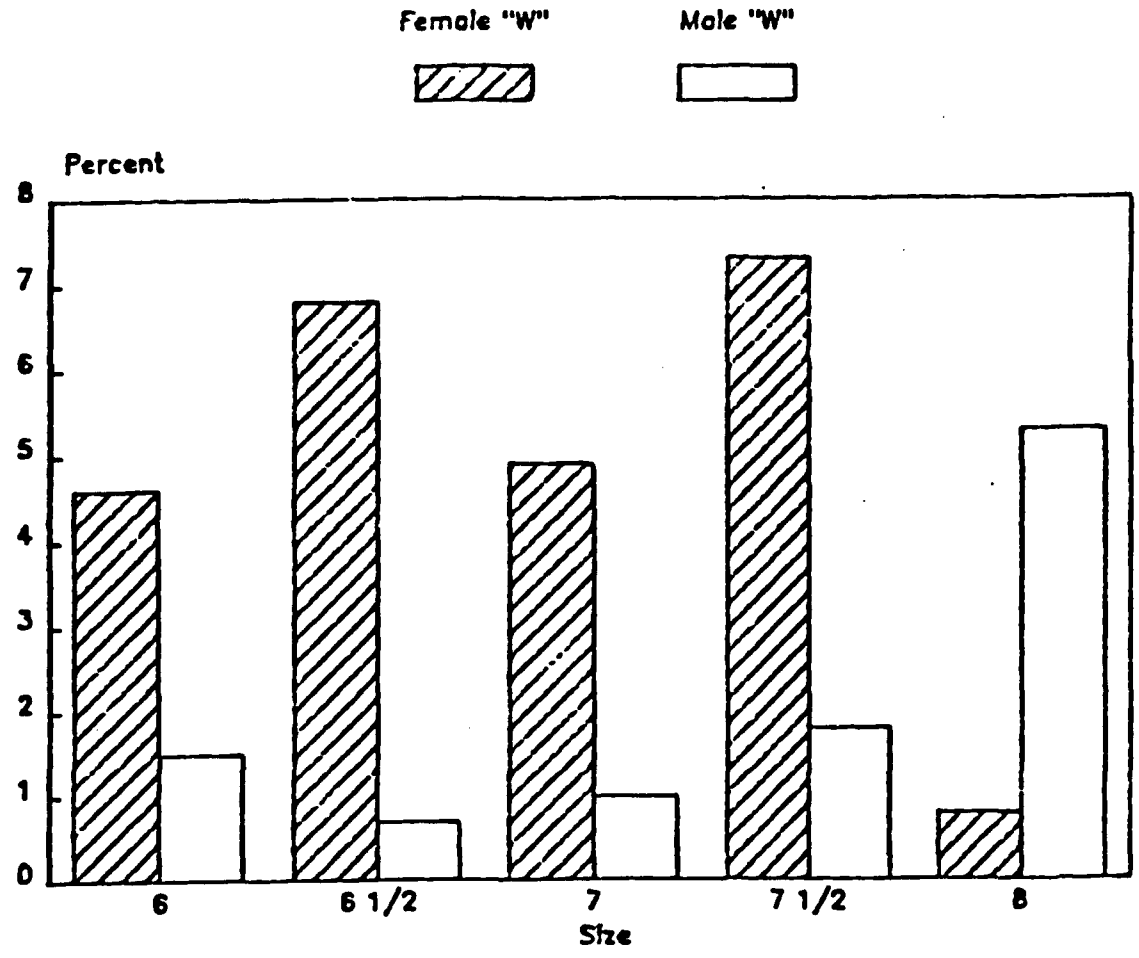

FIGURE 2: FREQUENCY OF FIT FOR BOTH MEN AND WOMEN WIDE "W" WIDTH SIZES

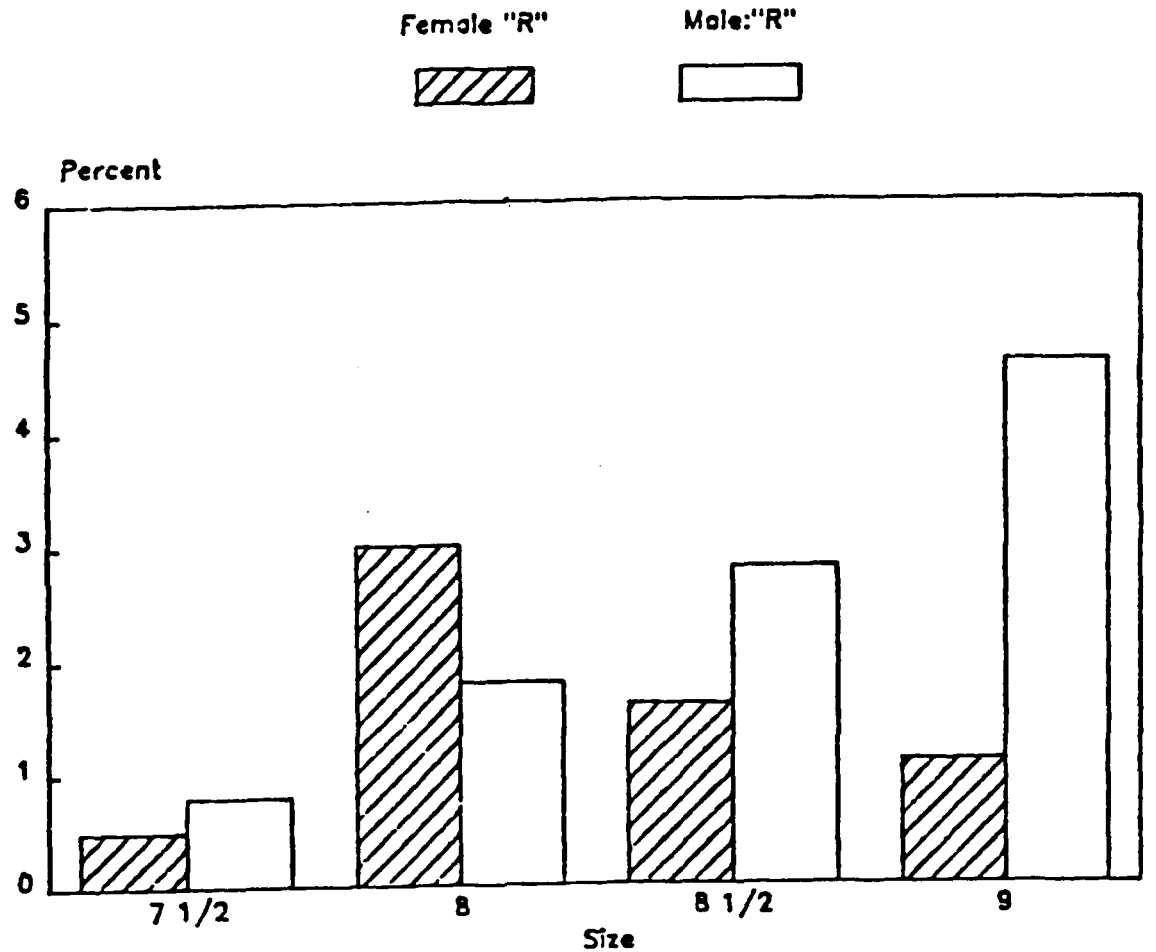

FIGURE 3: FREQUENCY OF FIT FOR BOTH MEN AND WOMEN
REGULAR "R" WIDTH SIZES

Appendix C. Fitting Data Form

NAVY CLOTHING AND TEXTILE RESEARCH FACILITY
NATICK, MASSACHUSETTS 01760-2490

FITTING DATA OF SAFETY FOOTWEAR

Test Subject No._____ Shoe Fitter_____ Date_____

Name_____ Length of Service

Age_____ Height_____ Weight_____ Organization_____

1. Military Size /_____/

2. Predicted Size: Grid_____; None_____.

3. Shoe Fitting:

   a. Initial try-on size_____
   b. Follow-up try-on sizes_____, _____, _____

   c. Determination of Fit: Fitted Size(s)

	Boot	Chukka	Oxford
(1) Test Subject	/_____/	/_____/	/_____/
(2) Shoe Fitter	/_____/	/_____/	/_____/

   d. Reasons for no-fit (State if size is not available):

      (1) Test Subject_____

      (2) Shoe Fitter_____

FOR WEAR TEST SUBJECTS ONLY

4. The fit of my **BOOT, CHUKKA, OXFORD** (Circle the one you test.) is: Just right___, Slightly loose___, Slightly tight___, Much too tight___, Much too loose___.

5. As to comfort, I find the footwear is: Excellent___, Good___, Average___, Fair___, Poor___. If poor, please explain in No. 6.

6. If you have other comments, complaints or suggestions, please write them in the space below:

_____
_____
_____
_____

Inspector's Initial_____

NCTRF 1 (ONE-TIME)
1 Nov 87